

KLF16 (A-12): sc-131167

BACKGROUND

Kruppel-like factors (KLFs) comprise a family of evolutionarily conserved zinc finger-containing transcription factors with diverse regulatory functions in cell growth, proliferation, differentiation and embryogenesis. Individual members of the Sp1-like/KLF family can function either as activators or repressors, depending on which promoter they bind and which coregulators they interact with. KLF16 (Kruppel-like factor 16), also known as BTEB4, DRRF (dopamine receptor-regulating factor) or NSLP2, is a 252 amino acid protein that contains three C₂H₂-type zinc fingers and belongs to the KLF transcription factor family. Localized to the nucleus and expressed at high levels in brain, KLF16 functions as a transcription factor that binds specifically to GT and GC boxes, displacing the transcription factors Sp1 and Sp3 and effectively modulating dopaminergic transmission in the brain.

REFERENCES

- Zhang, J.S., et al. 2001. A conserved α -helical motif mediates the interaction of Sp1-like transcriptional repressors with the corepressor mSin3A. *Mol. Cell. Biol.* 21: 5041-5049.
- Hwang, C.K., et al. 2001. Dopamine receptor regulating factor, DRRF: a zinc finger transcription factor. *Proc. Natl. Acad. Sci. USA* 98: 7558-7563.
- Kaczynski, J.A., et al. 2002. Functional analysis of basic transcription element (BTE)-binding protein (BTEB) 3 and BTEB4, a novel Sp1-like protein, reveals a subfamily of transcriptional repressors for the BTE site of the cytochrome P4501A1 gene promoter. *Biochem. J.* 366: 873-882.
- D'Souza, U.M., et al. 2002. Developmental expression of the zinc finger transcription factor DRRF (dopamine receptor regulating factor). *Mech. Dev.* 110: 197-201.
- Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606139. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Lee, S.H., et al. 2003. Genomic organization and promoter characterization of the murine dopamine receptor regulating factor (DRRF) gene. *Gene* 304: 193-199.
- Chiambaretta, F., et al. 2004. Cell and tissue specific expression of human Krüppel-like transcription factors in human ocular surface. *Mol. Vis.* 10: 901-909.
- Gutiérrez-Aguilar, R., et al. 2007. Analysis of KLF transcription factor family gene variants in type 2 diabetes. *BMC Med. Genet.* 8: 53.
- Parker-Katirae, L., et al. 2007. Identification of the imprinted KLF14 transcription factor undergoing human-specific accelerated evolution. *PLoS Genet.* 3: e65.

CHROMOSOMAL LOCATION

Genetic locus: KLF16 (human) mapping to 19p13.3.

SOURCE

KLF16 (A-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of KLF16 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-131167 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

KLF16 (A-12) is recommended for detection of KLF16 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other KLF family members.

Suitable for use as control antibody for KLF16 siRNA (h): sc-97813, KLF16 shRNA Plasmid (h): sc-97813-SH and KLF16 shRNA (h) Lentiviral Particles: sc-97813-V.

Molecular Weight of KLF16: 25 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **KLF16 (F-4): sc-377519**, our highly recommended monoclonal alternative to KLF16 (A-12).